

IN THE CLAIMS:

Please cancel Claims 17-31 without prejudice to or disclaimer of the subject matter recited therein.

Please add new Claims 32-47 to read as follows:

1-31. (Canceled)

32. (New) An apparatus comprising:

a mirror having a reflection surface which reflects incident light;

a heat-radiation member arranged at a light incidence side of said mirror,

spaced away from the reflection surface of said mirror and arranged outside a light path of the incident light and light reflected from the reflection surface; and

a temperature control member adapted to control temperature of said heat-radiation member.

33. (New) The apparatus according to claim 32, further comprising another heat-radiation member arranged at a side opposite to the light incidence side of said mirror and spaced away from a surface opposite to the reflection surface of said mirror.

34. (New) The apparatus according to claim 32, wherein said heat-radiation member includes a curved surface corresponding to the reflection surface of said mirror.

35. (New) The apparatus according to claim 32, wherein said heat-radiation member comprises a plurality of radiation plates, and wherein the light path is arranged between at least two of the plurality of radiation plates.

36. (New) The apparatus according to claim 35, wherein temperature of the plurality of heat-radiation plates are controlled individually.

37. (New) The apparatus according to claim 32, wherein said temperature control member includes a pipe connected to said heat-radiation member, and wherein temperature controlled liquid or gas flows inside the pipe.

38. (New) The apparatus according to claim 37, further comprising:
a mirror temperature detection unit adapted to detect a temperature of said mirror; and
a coolant temperature detection unit adapted to detect a temperature of liquid or gas flowing out of said heat-radiation member,
wherein said temperature control member controls a temperature of liquid or gas flowing into said heat-radiation member based on information concerning the incident light to said mirror, detection result of said mirror temperature detection unit and detection result of said coolant temperature detection unit.

39. (New) The apparatus according to claim 38, wherein said temperature control member controls a temperature of liquid or gas flowing into said heat-radiation member using a feedforward control.

40. (New) The apparatus according to claim 38, wherein said mirror temperature detection unit includes a radiation thermometer arranged to be spaced from said mirror.

41. (New) The apparatus according to claim 32, further comprising a mirror temperature detection unit adapted to detect temperature of said mirror at a plurality of points,

wherein temperature control member controls at least one of temperature and said heat-radiation member based on a temperature distribution on said mirror calculated from detection result of said mirror temperature detection unit.

42. (New) The apparatus according to claim 32, wherein said heat-radiation member includes an opening, and wherein the light path is arranged through the opening.

43. (New) The apparatus according to claim 32, wherein said temperature control member includes a pipe, in which temperature controlled liquid or gas flows, and a solid heat-transfer element, which is arranged between said heat-radiation member and the pipe and connected to said heat-radiation member and the pipe.

44. (New) The apparatus according to claim 32, further comprising:
a mirror support member adapted to support said mirror;
a heat-radiation member support member adapted to support said heat-radiation member; and
a mirror barrel to which said mirror support member and said heat-radiation member are fixed.

45. (New) The apparatus according to claim 32, further comprising:
a mirror support member adapted to support said mirror;
a heat-radiation member support member adapted to support said heat-radiation member;
a mirror barrel to which said mirror support member is fixed; and
a base to which said heat-radiation member is fixed,
wherein said mirror barrel and said base are separated from each other.

46. (New) An exposure apparatus for exposing a substrate to light via an original, said apparatus comprising:
a mirror apparatus comprising a mirror having a reflection surface which reflects incident light, a heat-radiation member arranged at a light incidence side of said mirror, spaced away from the reflection surface of said mirror and arranged outside a light path of the incident light and light reflected from the reflection surface; and a temperature control member adapted to control a temperature of said heat-radiation member,

wherein said mirror is configured and positioned to guide the light to at least one of the original and the substrate.

47. (New) A method of fabricating a device, said method comprising steps of:

exposing a substrate to light via an original using an exposure apparatus, said exposure apparatus comprising, a mirror apparatus comprising a mirror having a reflection surface which reflects incident light, a heat-radiation member arranged at a light incidence side of said mirror, spaced away from the reflection surface of said mirror and arranged outside a light path of the incident light and light reflected from the reflection surface; and a temperature control member adapted to control a temperature of said heat-radiation member, wherein said mirror is configured and positioned to guide the light to at least one of the original and the substrate;

developing the exposed substrate; and

processing the developed substrate to fabricate the device.